

GRADE 10 MATH - FACTORING REVIEW

NAME: _____

DATE: _____

Factor where possible. Write "prime" for any that do not factor.

1. $3x - 9xy$

$3x(1 - 3y)$

3. $5x^2 - 5y^2$

$5(x^2 - y^2)$
 $5(x - y)(x + y)$

5. $5 + 6x + x^2$

$x^2 + 6x + 5$
 $(x + 1)(x + 5)$

7. $x^4 - 64$

$(x^2 - 8)(x^2 + 8)$

9. $10x^2 + 7x + 1$

$(5x + 1)(2x + 1)$

11. $y^4 + 2y^2 + 9$

$(y^2)^2 + 2y^2 + 9$ prime.

13. $4y^4 - 16y^2 + 9$

() () prime.

15. $3x^2 - 27x + 54$

$3(x^2 - 9x + 18) = 3(x - 3)(x - 6)$

17. $3x^5 + 15x^3 + 12x$

$3x(x^4 + 5x^2 + 4)$
 $= 3x(x^2 + 1)(x^2 + 4)$

19. $9x^2 + 27x + 8$

$(3x + 1)(3x + 8)$

2. $9x^4 - 16y^2$

$(3x^2 - 4y)(3x^2 + 4y)$

4. $6x^2 - 13x - 5$

$(3x - 5)(2x - 1)$ doesn't work

6. $9x^2 + 1$

prime.

8. $-(9x^2 - y^4)$

$-(3x - y^2)(3x + y^2)$

10. $x^2 + 4x - 21$

$(x + 7)(x - 3)$

12. $x^2 - 121$

$(x - 11)(x + 11)$

14. $2y^2 + 24y + 40$

$2(y^2 + 12y + 20) = 2(y + 10)(y + 2)$

16. $4x^2 - 28x - 32$

$4(x^2 - 7x - 8) = 4(x - 8)(x + 1)$

18. $3x^2yz^3 + 18xy^2$

$3xy(xz^3 + 6y)$

20. $y^2 - y - 6$

$(y - 3)(y + 2)$